

10/089,393

REMARKS

In view of the following discussion, the Applicants submit that none of the claims now pending in the application is anticipated under the provisions of 35 U.S.C. § 102 or made obvious under the provisions of 35 U.S.C. § 103. Thus, the Applicants believe that all of these claims are in allowable form.

I. OBJECTIONS TO THE SPECIFICATION

The specification stands objected to for informalities. In response, the Applicants have amended the specification in order to more clearly describe aspects of the present invention.

In particular, paragraph [0003] of the specification has been amended, as suggested by the Examiner, to recite, "a single server will become inundated with requests for a resource", replacing "a single server will become inundated with requests for aresource". Paragraph [0004] of the specification has been amended, as suggested by the Examiner, to recite, "a plurality of servers, which are geographically distributed", replacing "a plurality of servers, whichare geographically distributed". Paragraph [0004] has also been amended to remove the hyperlinks "www.akamai.com" and "www.digisle.net". Paragraph [0014] has been amended to recite, "a directory hosting computer 20", replacing "a directory hosting computer 30".

In addition, the Applicants note the Examiner's request to capitalize all instances of the trademark "EMC" and to provide the associated generic terminology. The Applicants submit that the only instance of the trademark "EMC" appears in paragraph [0036] of the specification and is fully in accordance with the Examiner's request.

In light of these amendments, the Applicants respectfully request that the objection to the specification be withdrawn.

II. OBJECTION TO CLAIM 8

Claim 8 stands objected to for informalities. In response, the Applicants have amended claim 8 in order to more clearly recite aspects of the present invention.

In particular, claim 8 has been amended to delete the second instance of "is

10/089,393

located".

In light of this amendment, the Applicants respectfully request that the objection to claim 8 be withdrawn.

III. REJECTION OF CLAIMS 1-8, 12-13 AND 16-17 UNDER 35 U.S.C. § 102

Claims 1-8, 12-13 and 16-17 stand rejected as being anticipated by the Wolff patent (United States Patent No. 6,067,545, issued May 23, 2000, hereinafter "Wolff"). The Applicants respectfully traverse the rejection.

Particularly, the Examiner's attention is directed to that fact that Wolff fails to disclose or suggest the novel method of recruiting a network resource through a negotiation with the resource provider, as positively claimed by the Applicants in independent claim 1.

By contrast, Wolff only teaches mapping an alternate route from a network node (e.g., a server) to a required resource (e.g., a volume/file system). Specifically, if an "aware" client device (e.g., a device that can detect loading conditions at network nodes) determines that a first path to a resource will not function optimally due to overloading at a node in the first path, the client device devises an alternate second path to the resource through a different node or nodes. This is not the same as negotiating a condition for use of the resource with the resource provider, as claimed by the Applicants.

In particular, the methods of Wolff are concerned simply with the absolute loads at the network nodes. If a node on the path to the required resource is not overloaded, then that path will be used to access the resource. If the node is overloaded, the path is altered to incorporate a node that is not overloaded. Thus, the only "condition" to which use of a node is subject is the node's load, which is not a matter open to negotiation – the node is either overloaded or not overloaded. Thus, Wolff does not teach or suggest that the node on the alternate path - or the node on the original path for that matter - has the power to negotiate with the requester for the use of the required resource. That is, Wolff does not teach that the requester engages in a bargained-for exchange (i.e., where neither party completely controls the terms of the exchange) with any of the

10/089,393

nodes, e.g., to negotiate a condition under which the required resource will be provided by or via the node.

Notably, Applicants' invention claims a method in which the use of a network resource is recruited through a negotiation with the resource provider, as positively claimed by the Applicants in independent claim 1. Specifically, Applicants' independent claim 1 recites:

1. A method of recruiting a resource, comprising:
establishing a communications link between a requesting computer and a providing computer that is not controlled by the requesting computer;
the providing computer rejecting a first non-empty set of conditions communicated by the requesting computer; and
the providing computer providing a second non-empty set of conditions, different from the first non-empty set, as part of a negotiation under which the providing computer provides the resource to the requesting computer. (Emphasis added)

The Applicants' invention is directed to systems and methods for negotiated resource utilization. Conventional load balancing systems for large data processing operations (e.g., involving multiple, geographically distributed computing facilities) operate on a master-slave configuration. While this may work well for data processing operations that are controlled by a single "master" (e.g., a business organization), it is less than ideal for systems in which the computing facilities are all owned by independent operators. In such cases, the resources (e.g., processing, storage, etc.) of these computing facilities may be vastly under-utilized (and never made available to other members of the system) or over-utilized (in which quality of service suffers). In neither case are the resources being used efficiently.

The Applicants' invention provides a means for negotiated resource utilization. A first computer that requires a particular resource may establish a communication link to a second computer that has the required resource. Thereafter, the first and second computers negotiate the recruitment of the required resource by the first computer. The provision of the resource may be conditioned upon one or more stipulations established in the negotiation, such as monetary or other compensation provided to the second

10/089,393

computer, a subject matter or use to which the first computer wishes to apply the required resource, a percent availability of the required resource at the second computer, peer ratings information relating to the required resource and/or the first and second computers, or the like. In this manner, resources may be utilized in a more efficient manner that substantially reduces over- or under-utilization.

As discussed above, nowhere does Wolff teach, show or suggest the desirability of allowing a computer to request a resource by negotiating a condition for use of the resource with the resource's provider. Therefore, the Applicants submit that independent claim 1 fully satisfies the requirements of 35 U.S.C. §102 and is patentable thereunder.

Dependent claims 2-8, 12-13 and 16-17 depend from claim 1 and recite additional features therefore. As such, and for at least the same reasons set forth above, the Applicants submit that claims 2-8, 12-13 and 16-17 are not anticipated by the teachings of Wolff. Therefore, the Applicants submit that dependent claims 2-8, 12-13 and 16-17 also fully satisfy the requirements of 35 U.S.C. §102 and are patentable thereunder.

IV. REJECTION OF CLAIMS 9-11, 14-15 AND 18-21 UNDER 35 U.S.C. § 103

Claims 9-11, 14-15 and 18-21 stand rejected as being made obvious by Wolff in view of the Lipa et al. patent (United States Patent No. 6,061,722, issued May 9, 2000, hereinafter "Lipa"). The Applicants respectfully traverse the rejection.

The Examiner's attention is directed to the fact that Lipa and Wolff, singly or in any permissible combination, fail to disclose or suggest the novel method of recruiting a network resource through a negotiation with the resource provider, as positively claimed by the Applicants in independent claims 1 and 18.

Nowhere does Wolff or Lipa teach or even suggest the desirability of providing information (e.g., conditions, peer ratings) for use in the negotiation (e.g., a two-way, bargained-for exchange) for the use of a network resource. As discussed above, Wolff teaches providing resources based on the current loading of the resource providers – in other words, a black-and-white, a one-sided determination as to the resource providers'

10/089,393

capabilities to provide the resource. Lipa teaches providing resources based on the requester's compatibility with predetermined system requirements (e.g., as measured by indicators such as latency, bandwidth, CPU performance, memory size, etc.) – again, a one-sided determination of the requirements for provision of the resources. In both cases, all that is provided is a simple litmus test to determine availability or compatibility. Thus, there is no "negotiation" taking place – the node is either overloaded or not overloaded; the user hardware is either compatible with system requirements or not compatible.

Moreover, as the Examiner concedes on Pages 9-10 of the Office Action, Wolff does not teach the use of a compensation value. Lipa also does not teach providing at least one item of compensation value, where the compensation value may be used to negotiate use of the associated resources. The passage cited by the Examiner only discusses using independently assessed (e.g., by the requester) ratings of the quality of available network connections. These ratings are merely used to select the best connection from among a plurality of available connections.

Notably, Applicants' invention claims the step of negotiating for the use of a resource with the provider of the resource, as positively claimed by the Applicants in independent claims 1 and 18. Applicants' independent claim 1 has been recited above. Applicants' independent claim 18 recites:

18. A directory of computer controlled resources, comprising:
 - a plurality of resource descriptions;
 - at least one condition for use of each of the plurality of resource descriptions; and
 - at least one item of compensation value for each of the plurality of resource descriptions, wherein the at least one item of compensation value is used by a requesting computer to negotiate with a providing computer for use of at least one of the computer controlled resources. (Emphasis added)

As discussed above, the combination of Wolff and Lipa fails to teach, show or suggest the desirability of allowing a computer to request a resource by negotiating a condition for use of the resource with the resource's provider. Therefore, the Applicants respectfully submit that independent claims 1 and 18 fully satisfy the requirements of 35

10/089,393

U.S.C. §103 and are patentable thereunder.

Dependent claims 9-11, 14-15 and 19-21 depend from claims 1 and 18 and recite additional features therefore. As such, and for at least the same reasons set forth above, the Applicants submit that claims 9-11, 14-15 and 19-21 are not made obvious by the teachings of Wolff in view of Lipa. Therefore, the Applicants submit that dependent claims 9-11, 14-15 and 19-21 also fully satisfy the requirements of 35 U.S.C. §103 and are patentable thereunder.

V. CONCLUSION


Thus, the Applicants submit that all of the presented claims fully satisfy the requirements of 35 U.S.C. §102 and 35 U.S.C. §103. Consequently, the Applicants believe that all these claims are presently in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

If, however, the Examiner believes that there are any unresolved issues requiring the issuance of a final action in any of the claims now pending in the application, it is requested that the Examiner telephone Mr. Kin-Wah Tong, Esq. at (732) 530-9404 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

2/28/06
Date

Patterson & Sheridan, LLP
595 Shrewsbury Avenue
Shrewsbury, New Jersey 07702

Respectfully submitted,


Kin-Wah Tong, Attorney
Reg. No. 39,400
(732) 530-9404